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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,022	04/06/2001	Joe Depaolantonio	CSCO-3809	6438

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EXAMINER
TAYLOR, BARRY W

ART UNIT	PAPER NUMBER
2643	8

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/828,022	DEPAOLANTONIO, JOE	
	Examiner	Art Unit	
	Barry W Taylor	2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 9-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 9-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-7, 9-17, 26-29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cowan et al (6,115,743 hereinafter Cowan) in view of Chin et al (6,456,306 hereinafter Chin).

Regarding claims 1, 12, 17, 26 and 31. Cowan teaches an automated network communication device audit tool method (Title, abstract) comprising:

gathering communication device information (abstract, col. 2 lines 11-67, col. 3 line 64 – col. 5 line 56, col. 6 lines 30-67, col. 7 lines 1-10, col. 9 line 48 – col. 10 line 22, col. 10 line 65 – col. 11 line 58, col. 12 line 9 – col. 13 line 54, col. 14 line 29 – col. 15 line 9, col. 16 lines 26-47) automatically (see figure 2 and columns 5-16 especially column 10 lines 58-64);

parsing the gathered communication device information (col. 1 lines 30-35, col. 2 lines 44-58, col. 3 line 64 – col. 4 line 11, col. 5 lines 49-60, col. 6 lines 30-35, col. 7 lines 1-10, col. 9 lines 23-67, columns 14-16), including identifying portions of the communication device information and correlating the portions of the communication

device information to an operation or characteristic of a network communications device (figures 11 and 16, col. 10 lines 12-22, col. 12 lines 33-46, col. 13 lines 18-32);

determining if additional communication device information is required (col. 2 line 59 – col. 3 line 3, col. 6 lines 36-67, col. 11 lines 36-67, col. 13 line 65 – col. 14 line 28);

analyzing the characteristic and operations of the network communication device (abstract, col. 2 lines 11-67, col. 3 line 64 – col. 5 line 56, col. 6 lines 30-67, col. 7 lines 1-10, col. 9 line 48 – col. 10 line 22, col. 10 line 65 – col. 11 line 58, col. 12 line 9 – col. 13 line 54, col. 14 line 29 – col. 15 line 9, col. 16 lines 26-47); and

reporting the communication device information (abstract, col. 2 lines 11-67, col. 3 line 64 – col. 5 line 56, col. 6 lines 30-67, col. 7 lines 1-10, col. 9 line 48 – col. 10 line 22, col. 10 line 65 – col. 11 line 58, col. 12 line 9 – col. 13 line 54, col. 14 line 29 – col. 15 line 9, col. 16 lines 26-47) in a convenient format including identification of problems (figure 11).

According to Applicant, Cowan fails to teach reference to configuration, performance or functionality characteristic (see paper number 7, Amendment "B", dated 04/20/040).

Chin teaches method and apparatus for displaying health status of network devices (abstract). Chin discloses configuration, performance and fault information (abstract, col. 3 lines 60-65). Chin teaches an event driven fault management system to report operational state of devices (col. 6 lines 8-67) to network manager. Chin teaches fault management system helps identify and resolve problems (col. 6 line 65 – col. 7 line

17). Chin further uses color display to indicate location and health status (col. 7 line 18 - col. 8 line 35).

It would have been obvious for any one of ordinary skill in the art at the time of invention to modify the invention as taught by Cowan to use unsolicited messages as taught by Chin for the benefit of notifying network manager the network devices currently experiencing problems as taught by Chin.

Regarding claim 2. Cowan teaches retrieving information regarding the device and status of device (col. 2 lines 22-58, col. 5 lines 20-56).

Regarding claims 3 and 27. Cowan teaches automatically queries device (col. 12 line 64 – col. 13 line 7, col. 14 line 61 – col. 15 line 9, col. 15 line 55 – col. 16 line 47).

Regarding claims 4 and 28. Cowan teaches telecommunication networks including fiber transmission systems (col. 1 lines 10-22).

Regarding claims 5 and 29. Cowan teaches constructing the queries by issuing protocol commands formatted in the appropriate syntax for the communication device (col. 4 line 61 – col. 5 line 19).

Regarding claim 6. Cowan teaches analyzing the performance of the communication device (figure 11, col. 13 lines 8-12).

Regarding claim 7. Cowan teaches correlating the device with characteristic data (figures 11 and 16, col. 10 lines 12-22, col. 12 lines 33-46, col. 13 lines 18-32).

Regarding claims 9-11. According to Applicant, Cowan fails to teach reference to configuration, performance or functionality characteristic (see paper number 7, Amendment "B", dated 04/20/040).

Chin teaches method and apparatus for displaying health status of network devices (abstract). Chin discloses configuration, performance and fault information (abstract, col. 3 lines 60-65). Chin teaches an event driven fault management system to report operational state of devices (col. 6 lines 8-67) to network manager. Chin teaches fault management system helps identify and resolve problems (col. 6 line 65 – col. 7 line 17). Chin further uses color display to indicate location and health status (col. 7 line 18 - col. 8 line 35).

It would have been obvious for any one of ordinary skill in the art at the time of invention to modify the invention as taught by Cowan to use unsolicited messages as taught by Chin for the benefit of notifying network manager the network devices currently experiencing problems as taught by Chin.

Regarding claim 13. Cowan teaches wherein device audit information includes device configuration information (figure 16), performance level information (figure 16), and identification parameters that do not meet threshold levels (see fault analysis component 416 figure 4, col. 10 lines 12-22, col. 10 line 65 – col. 11 line 67, columns 12-16).

Regarding claim 14. Cowan teaches wherein the network communication device audit information includes a network communication device audit report that has the

same user friendly look and feel for a variety of devices across different architectures and is organized in a manner that facilitates network management and maintenance (figure 11, col. 4 line 61 – col. 5 line 19).

Regarding claim 15. Cowan teaches wherein the network communication device audit report presents information associated with different areas of network management impact (col. 7 lines 1-10, col. 10 lines 12-22, col. 10 line 65 – col. 11 line 65, col. 12 lines 33-67, columns 13-16).

Regarding claim 16. Cowan teaches wherein areas of network management impact areas includes fault management, performance management, capacity management, and configuration management (abstract, col. 2 lines 11-67, col. 3 line 64 – col. 5 line 56, col. 6 lines 30-67, col. 7 lines 1-10, col. 9 line 48 – col. 10 line 22, col. 10 line 65 – col. 11 line 58, col. 12 line 9 – col. 13 line 54, col. 14 line 29 – col. 15 line 9, col. 16 lines 26-47, figures 11 and 16).

2. Claims 18-25, 30 and 32-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cowan et al (6,115,743 hereinafter Cowan) in view of Chin et al (6,456,306 hereinafter Chin) further in view of Tonelli et al (6,229,540 hereinafter Tonelli).

Regarding claims 18-23 and 32-36. Cowan in view of Chin do not explicitly show using net rules.

Tonelli teaches a method for designing networks including auditing a network to discover a present network configuration, creating a network design sheet from the discovered network configuration, placing device icons representing intelligent device objects on the network design sheet, selecting a media type representing an intelligent media object, and connection the media type to a first one of the devices icons and validating the connection to the fires one of the device icons (Title, abstract). Tonelli discloses each element has its own behavioral characteristics and likely comes from a different vender and systems made up of these elements experience change or encounter problems (i.e. congestion, circuit failure, or component degradation) and overall effects can range from a minor slowdown to complete collapse (see Background). Tonelli provides a software implemented method for auditing a network by using more than one soft probes to discover topology, host and interface information on devices in the network. The auditing includes gathering the data with soft probes that include a Simple Network Management Protocol (SNMP) probe and a Novell IPX probe. The core data set discovered by an audit includes addresses, system identifications, name and description, of network components (columns 1-24). Tonelli discloses that through rules engine, the design software validates a network design at several levels. Tonelli discloses that validation prevents the user from making invalid connections and, where possible, assists the user in completing intermediate configurations that make otherwise invalid connections valid (column 4). Tonelli discloses the network design software identifies the mismatch and assists the user in configuring a solution (col. 4 lines 60-67). Tonelli discloses the network designs

software validates to conformance to standards (bottom column 4) and cable segment length in a local area network and total distance of an FDDI ring are checked against maximums set by the standard, and for Ethernet network, the network design software checks repeater density, cable length, and looks for loops in the topology. Tonelli discloses that device icons correspond to intelligent objects built from templates wherein templates define rules for object instantiation such that each instantiation accurately reflects the characteristics of the corresponding network device (columns 5-6). In accordance with the manufacturer's specifications, the device objects model the functionality of the corresponding network devices, including physical properties, port and slot types, available adapter card options and asset management. For example, Cisco AGS+ multi-protocol router object behaves like the real AGS+ (column 7), including the CBUS/Multibus dual bus scheme and the multiple protocols found on its adaptor cards. As another example, the Cabletron MMAC-5 hub object includes the correct number of FNBMGT and FNBMM bus slots and two embedded console ports and device objects may also include technical notes and photographs of the corresponding device (columns 7-22).

Therefore, it would have been obvious for any one of ordinary skill in the art at the time of the invention to modify the graphical user interface as taught by Cowan in view of Chin to include device icons and rules engine software as taught by Tonelli so that audit tool may interact with different cards manufactured by different venders such as Cisco or Cabletron as taught by Tonelli.

Regarding claim 24. Cowan teaches the audit tool identifies potential causes of problems (abstract, col. 2 lines 11-67, col. 3 line 64 – col. 5 line 56, col. 6 lines 30-67, col. 7 lines 1-10, col. 9 line 48 – col. 10 line 22, col. 10 line 65 – col. 11 line 58, col. 12 line 9 – col. 13 line 54, col. 14 line 29 – col. 15 line 9, col. 16 lines 26-47, figure 11).

Regarding claims 25, 30 and 37. Cowan in view of Chin do not explicitly show providing a suggested corrective course of action for a problem.

Tonelli teaches a method for designing networks including auditing a network to discover a present network configuration, creating a network design sheet from the discovered network configuration, placing device icons representing intelligent device objects on the network design sheet, selecting a media type representing an intelligent media object, and connection the media type to a first one of the devices icons and validating the connection to the fires one of the device icons (Title, abstract). Tonelli discloses each element has its own behavioral characteristics and likely comes from a different vender and systems made up of these elements experience change or encounter problems (i.e. congestion, circuit failure, or component degradation) and overall effects can range from a minor slowdown to complete collapse (see Background). Tonelli provides a software implemented method for auditing a network by using more than one soft probes to discover topology, host and interface information on devices in the network. The auditing includes gathering the data with soft probes that include a Simple Network Management Protocol (SNMP) probe and a Novell IPX probe. The core data set discovered by an audit includes addresses, system

identifications, name and description, of network components (columns 1-24). Tonelli discloses that through rules engine, the design software validates a network design at several levels. Tonelli discloses that validation prevents the user from making invalid connections and, where possible, assists the user in completing intermediate configurations that make otherwise invalid connections valid (column 4). Tonelli discloses the network design software identifies the mismatch and assists the user in configuring a solution (col. 4 lines 60-67). Tonelli discloses the network designs software validates to conformance to standards (bottom column 4) and cable segment length in a local area network and total distance of an FDDI ring are checked against maximums set by the standard, and for Ethernet network, the network design software checks repeater density, cable length, and looks for loops in the topology. Tonelli discloses that device icons correspond to intelligent objects built from templates wherein templates define rules for object instantiation such that each instantiation accurately reflects the characteristics of the corresponding network device (columns 5-6). In accordance with the manufacturer's specifications, the device objects model the functionality of the corresponding network devices, including physical properties, port and slot types, available adapter card options and asset management. For example, Cisco AGS+ multi-protocol router object behaves like the real AGS+ (column 7), including the CBUS/Multibus dual bus scheme and the multiple protocols found on its adaptor cards. As another example, the Cabletron MMAC-5 hub object includes the correct number of FNBMGT and FNBMM bus slots and two embedded console ports

and device objects may also include technical notes and photographs of the corresponding device (columns 7-22).

Therefore, it would have been obvious for any one of ordinary skill in the art at the time of the invention to modify the graphical user interface as taught by Cowan in view of Chin to include device icons and rules engine software as taught by Tonelli so that audit tool may identify mismatches thus preventing the user from making invalid connections as taught by Tonelli.

Response to Arguments

3. Applicant's arguments with respect to claims 1-7 and 9-37 have been considered but are moot in view of the new ground(s) of rejection.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry W. Taylor whose telephone number is (703) 305-4811. The examiner can normally be reached on Monday-Friday from 6:30am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on (703) 305-4708. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Technology Center 2600 customer service Office whose telephone number is (703) 306-0377.

CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600